

☐ SECRET

Approved For Release 2001/04/02 : CIA-RDP78B04747A000200040014-1

#991495
☒ CONFIDENTIAL

☐ UNCLASSIFIED

CONTRACT INSPECTION REPORT

CONTRACT NO.

TASK NO.

25X1A

TO:

CONTRACT ADMINISTRATION & SETTLEMENT
BRANCH/PD/OL

DATE

27 January 1966

INSPECTION REPORT NO. (If final, so state)

5 - Final Report for Phase II

ESTIMATED COMPLETION DATE

24 January 1966

NAME OF CONTRACTOR

Declass Review
By NIMA/DOD

TYPE OF COMMODITY OR SERVICE

High Precision Stereo Comparator (Design Study)

25X1A

THE CONTRACTOR IS ON SCHEDULE



YES



NO

THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS ☒ YES ☐ NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED.

PER CENT OF WORK COMPLETED - 100%

PER CENT OF FUNDS EXPENDED - 100%

HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? ☒ YES ☐ NO (If yes, give details on reverse side.)

HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? ☐ YES ☒ NO (If yes, indicate items, quantity, and cost on reverse side.)

INCENTIVES

IS THIS AN INCENTIVE CONTRACT

☐ YES

☒ NO

IF YES, CHECK TYPE

☐ COST

☐ PERFORMANCE

☐ DELIVERY

NOTE:
USE REVERSE SIDE FOR COMMENTS.
FINAL REPORT MUST CONTAIN INCENTIVE EVALUATION.

OVERALL PERFORMANCE OF CONTRACTOR

1. ☐ OUTSTANDING

3. ☐ ABOVE AVERAGE

5. ☐ BELOW AVERAGE 7. ☐ UNSATISFACTORY

2. ☐ EXCELLENT

4. ☒ AVERAGE

6. ☐ BARELY ADEQUATE

IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.

RECOMMENDED ACTION



CONTINUE AS PROGRAMMED



WITHHOLD PAYMENT PENDING
SATISFACTORY PERFORMANCE



TERMINATE



OTHER (Specify)

IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT PUT COMMENTS ON REVERSE IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:

ITEM	REC'D	DOES NOT APPLY	ITEM	REC'D	DOES NOT APPLY
PROTOTYPES			MANUALS		
DRAWINGS AND SPECIFICATIONS			FINAL REPORT	X	
PRODUCTION AND/OR OTHER END ITEMS			SPECIAL TOOLING		
			OTHER GOVERNMENT PROPERTY		

DATE OF LAST CONTACT WITH CONTRACTOR

24 January 1966

SIGNATURE OF INSPECTOR

DIVISION

P&DS

INSPECTOR'S EXTENSION

2476

SIGNATURE

25X1A

Approved For Release 2001/04/02 : CIA-RDP78B04747A000200040014-1

FORM 10-65 1897

USE PREVIOUS EDITION

☐ UNCLASSIFIED

☒ CONFIDENTIAL

☐ SECRET

(12-36)

☐ SECRET

☒ CONFIDENTIAL

☐ UNCLASSIFIED

Approved For Release 2001/04/02 : CIA-RDP78B04747A000200040014-1
NARRATIVE REPORT

☐ INTERIM

☒ FINAL

25X1A The monthly report for the period ending 31 December 1965 and the final report for the study were hand delivered to the Project Monitor on 24 January 1966.

25X1A [REDACTED] was invited to present an oral presentation covering their findings; they accepted and it took place at the Center on 24 January 1966.

25X1A [REDACTED]
25X1A [REDACTED] briefed on organizational set^{up} and previous related projects: Fringe Count Micrometer, Angle Reader, Film Data Readout System, Video Enhancer, Holography, and Optical Correlation.

25X1A [REDACTED] reviewed the specifications in the design objectives and the various approaches taken in solving the problems. An artists conception of the entire system was displayed, it will take up a 20ft. by 25ft. area. The overall display of each stage will be by CRT; the stereo viewing system will be by optics including a 1 to 3.5 zoom, 10X eyepieces, and choice of 3 objective lens; the measuring system will be laser-interferometer; air bearing tables will be used for moving the X and Y tables; vacuum hold down used to hold the film against the platen; automatic stereo correlation and tracking using electronics and a computer; and there is provision for anamorphic correction.

25X1A [REDACTED] described the optics and reticle introduction into the optical train.

25X1A The final report will be studied and compared against the competitive study by [REDACTED]. It is hoped that a selection will be made by the middle of February.

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☐ SECRET ☒ CONFIDENTIAL ☐ UNCLASSIFIED

Approved For Release 2001/04/02 : CIA-RDP78B04747A000200040014-1

CONTRACT INSPECTION REPORT

CONTRACT NO.

DATE

20 December 1965

INSPECTION REPORT NO. (If final, so state)

5

ESTIMATED COMPLETION DATE

1 January 1966 Phase 1

TO:

CONTRACT ADMINISTRATION & SETTLEMENT
BRANCH/PD/OL

NAME OF CONTRACTOR

TYPE OF COMMODITY OR SERVICE

High Precision Stereo Comparator Study

THE CONTRACTOR IS ON SCHEDULE

☒ YES

☐ NO

THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS ☒ YES ☐ NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED.

PER CENT OF WORK COMPLETED -

85%

PER CENT OF FUNDS EXPENDED -

85%

HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? ☒ YES ☐ NO (If yes, give details on reverse side.)

HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? ☐ YES ☒ NO (If yes, indicate items, quantity, and cost on reverse side.)

INCENTIVES

IS THIS AN INCENTIVE CONTRACT
IF YES, CHECK TYPE

☐ YES

☒ NO

☐ COST

☐ PERFORMANCE

☐ DELIVERY

NOTE:
USE REVERSE SIDE FOR COMMENTS.
FINAL REPORT MUST CONTAIN INCENTIVE EVALUATION.

OVERALL PERFORMANCE OF CONTRACTOR

1. ☐ OUTSTANDING

3. ☐ ABOVE AVERAGE

5. ☐ BELOW AVERAGE 7. ☐ UNSATISFACTORY

2. ☐ EXCELLENT

4. ☒ AVERAGE

6. ☐ BARELY ADEQUATE

IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.

RECOMMENDED ACTION

☒ CONTINUE AS PROGRAMMED

☐ WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE

☐ TERMINATE

☐ OTHER (Specify)

IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT PUT COMMENTS ON REVERSE IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:

ITEM	REC'D	DOES NOT APPLY	ITEM	REC'D	DOES NOT APPLY
PROTOTYPES			MANUALS		
DRAWINGS AND SPECIFICATIONS			FINAL REPORT		
PRODUCTION AND/OR OTHER END ITEMS			SPECIAL TOOLING		
			OTHER GOVERNMENT PROPERTY		

DATE OF LAST CONTACT WITH CONTRACTOR

16 December 1965

SIGNATURE OF INSPECTOR

DIVISION

INSPECTOR'S EXTENSION

SIG

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NARRATIVE REPORT

☒ INTERIM

☐ FINAL

25X1A
25X1A

[REDACTED] of P&DS along with [REDACTED]
[REDACTED] of TID visited the contractors facility on the
16th of December 1965.

25X1A

25X1A

The Project Engineer, [REDACTED], reviewed the work accomplished to date under this contract. An artists conception of the system was viewed, it appears that it will require an area 20ft. by 26ft. The contractor was instructed to move the light table to a comfortable position on the operators console. Each comparator stage will be about 7ft. long including housing and the operators console will be approximately 5ft. long. The contractor was instructed to investigate a separate filtering system for each comparator stage. The monitor requested that [REDACTED] also study the [REDACTED] to see if the recovery time is satisfactory for this type system.

25X1A

25X1A

A plywood mockup of a comparator stage was inspected. This included a mockup of the X and Y air stages and the suggested method of loading roll film.

25X1A

A demonstration of a 1000 line CRT display system, raster shaping and the Electro Analog correlation system was presented during a tour of the Methrology Lab.

Problem areas remaining are: Vacuum hold down, the optical linkage between the comparator stages and the periscope system and the optical correlation for the viewing system. These problems will be studied during the next reporting period.

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☐ UNCLASSIFIED

CONTRACT INSPECTION REPORT

CO

TASK NO.

25X1A

TO:

CONTRACT ADMINISTRATION & SETTLEMENT
BRANCH/PD/OL

DATE

3 November 1965

INSPECTION REPORT NO. (If final, so state)

4

ESTIMATED COMPLETION DATE

1 January 1966

NAME OF CONTRACTOR

TYPE OF COMMODITY OR SERVICE

High Precision Stereo Comparator Study

THE CONTRACTOR IS ON SCHEDULE



YES



NO

PER CENT OF WORK COMPLETED -

75%

PER CENT OF FUNDS EXPENDED -

75%

THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS ☒ YES ☐ NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED.

HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? ☒ YES ☐ NO (If yes, give details on reverse side.)

HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? ☐ YES ☒ NO (If yes, indicate items, quantity, and cost on reverse side.)

INCENTIVES

IS THIS AN INCENTIVE CONTRACT

☐ YES

☒ NO

IF YES, CHECK TYPE



COST



PERFORMANCE



DELIVERY

NOTE: USE REVERSE SIDE FOR COMMENTS. FINAL REPORT MUST CONTAIN INCENTIVE EVALUATION.

OVERALL PERFORMANCE OF CONTRACTOR

1. ☐ OUTSTANDING

3. ☐ ABOVE AVERAGE

5. ☐ BELOW AVERAGE 7. ☐ UNSATISFACTORY

2. ☐ EXCELLENT

4. ☒ AVERAGE

6. ☐ BARELY ADEQUATE

IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.

RECOMMENDED ACTION



CONTINUE AS PROGRAMMED



WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE



TERMINATE



OTHER (Specify)

IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT PUT COMMENTS ON REVERSE IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:

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PROTOTYPES			MANUALS		
DRAWINGS AND SPECIFICATIONS			FINAL REPORT		
PRODUCTION AND/OR OTHER END ITEMS			SPECIAL TOOLING		
			OTHER GOVERNMENT PROPERTY		

DATE OF LAST CONTACT WITH CONTRACTOR

4 November 1965

SIGNATURE OF INSPECTOR

DIVISION

PADS

INSPECTOR'S EXTENSION

SIG

Approved For Release 2001/04/02 : CIA-RDP78B04747A000200040014-1

FORM 10-65 1897

USE PREVIOUS EDITION

☐ UNCLASSIFIED

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(12-36)

☐ SECRET

☒ CONFIDENTIAL

☐ UNCLASSIFIED

Approved For Release 2001/04/02 :

040014-1

NARRATIVE REPORT

The air bearing table being prepared for [REDACTED] was demonstrated and its two axis movement is very smooth. The air is filtered to 1 micron through 3 filters.

The table designs were studied. Three point support has been selected for the tables. The material for the base has not been selected, materials under consideration are: 410 stainless steel, granite, and Neohanite. The optical opening will be about 8 inches and the base will have to be machined to 50 millionths. [REDACTED] expects some difficulty in maintaining the flatness required for the optical system on the two tables. [REDACTED] requested vibration figures for the building, this will be supplied when [REDACTED] report is available. The monitor requested that provision be made for transporting film both left and right and not just one direction as proposed by [REDACTED]

Full format viewing still seems to be the most troublesome point. [REDACTED] has investigated many approaches, the latest being: [REDACTED] drum recorder. This will record the image prior to the film reaching the stage, store it and then display it as the film arrives on the stage. This would be a 1000 line TV type display. The cost of this would be high, [REDACTED] per stage or [REDACTED] for both stages.

Metering seems to be progressing, the systems have been reduced to a choice between the Phasolver and the Laser Interferometer. [REDACTED] Interferometer has been rejected. It appears that [REDACTED] is leaning toward [REDACTED] Interferometer. It is felt that the Interferometer would have less pitch error than the phasolver. [REDACTED] is presently studying the possible use of [REDACTED] counters. [REDACTED] suggested they also study [REDACTED] counters.

The optics have been thoroughly covered and appear to be sound system.

Studies are underway covering optical and analog correlation. Demonstrations of raster shaping and simple analog were presented.

[REDACTED] informed us that they had over-spent on full format viewing and that they will not be able to present a full study of correlation in the final report nor will they have funds for ray tracing on the computer.

A supplemental proposal will be submitted for these two phases of the work.

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CONTRACT INSPECTION REPORT

CONTRACT NO. [REDACTED]

TASK NO. 200040014-1

25X1A

TO:

ENGINEERING SECTION/CB/PD/OL

DATE

30 September 1965

INSPECTION REPORT NO. (If final, so state)

3

ESTIMATED COMPLETION DATE

1 January 1966

NAME OF CONTRACTOR

TYPE OF COMMODITY OR SERVICE

High Precision Stereo Comparator Study

THE CONTRACTOR IS ON SCHEDULE

☒ YES

☐ NO

THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS ☒ YES ☐ NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED.

PER CENT OF WORK COMPLETED -

PER CENT OF FUNDS EXPENDED -

HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? ☒ YES ☐ NO (If yes, give details on reverse side.)

HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? ☐ YES ☒ NO (If yes, indicate items, quantity, and cost on reverse side.)

INCENTIVES

IS THIS AN INCENTIVE CONTRACT IF YES, CHECK TYPE

☐ YES

☒ NO

☐ COST

☐ PERFORMANCE

☐ DELIVERY

NOTE: USE REVERSE SIDE FOR COMMENTS. FINAL REPORT MUST CONTAIN INCENTIVE EVALUATION.

OVERALL PERFORMANCE OF CONTRACTOR

1. ☐ OUTSTANDING

2. ☐ EXCELLENT

3. ☐ ABOVE AVERAGE

4. ☒ AVERAGE

5. ☐ BELOW AVERAGE

6. ☐ BARELY ADEQUATE

7. ☐ UNSATISFACTORY

IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.

RECOMMENDED ACTION

☒ CONTINUE AS PROGRAMMED

☐ WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE

☐ TERMINATE

☐ OTHER (Specify)

IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT PUT COMMENTS ON REVERSE IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:

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PROTOTYPES			MANUALS		
DRAWINGS AND SPECIFICATIONS			FINAL REPORT		
PRODUCTION AND/OR OTHER END ITEMS			SPECIAL TOOLING		
			OTHER GOVERNMENT PROPERTY		

25X1A

DATE OF LAST CONTACT WITH CONTRACTOR

29 September 1965 at [REDACTED]

SIGNATURE OF INSPECTOR

DIVISION

25X1A

INSPECTOR'S EXTENSION

SIGNATURE OF [REDACTED]

Approved For Release 2001/04/02 : CIA-RDP78

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NARRATIVE REPORT

☒ INTERIM

☐ FINAL

25X1A
A meeting was held at NPIC, [REDACTED]
represented NPIC and [REDACTED] represented the [REDACTED]

25X1A

25X1A

The contractor was informed that a theta correction would not be required for each table of the comparator. It was agreed that this correction could be handled adequately by the existing computer program. The contractor was requested to omit the elaborate cover and binding from the monthly reports. He agreed to simply staple future monthly reports.

The contractor requested that a group including operational personnel, come to the contractor's facility sometime in October to view the bench models being tested and to attend a mid-point meeting for this study.

The monitor reemphasized the space limitation for the proposed comparator and the need for further study of the problem of viewing the entire film format for general orientation.

The contractor reports that he is ready to demonstrate feasibility models of the following:

1. X and Y air bearing table
2. Raster shaping circuitry for use in panoramic photography.
(This is a study for [REDACTED])
3. Analog and Optical Correlators
4. Digital correlation

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Approved For Release 2001/04/02 : CIA-RDP78B04747A000200040014-1

CONTRACT INSPECTION REPORT

25X1A

TO:

ENGINEERING SECTION/CB/PD/OL

DATE

23 September 1965

INSPECTION REPORT NO. (If final, so state)

2

ESTIMATED COMPLETION DATE

1 January 1966

NAME OF CONTRACTOR

TYPE OF COMMODITY OR SERVICE

High Precision Stereo Comparator

THE CONTRACTOR IS ON SCHEDULE

☒ YES

☐ NO

THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS ☒ YES ☐ NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED.

PER CENT OF WORK COMPLETED - 15%
PER CENT OF FUNDS EXPENDED - 15%

HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? ☒ YES ☐ NO (If yes, give details on reverse side.)

HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? ☐ YES ☒ NO (If yes, indicate items, quantity, and cost on reverse side.)

INCENTIVES

IS THIS AN INCENTIVE CONTRACT
IF YES, CHECK TYPE

☐ COST

☐ PERFORMANCE

☐ DELIVERY

☐ YES ☒ NO

NOTE:
USE REVERSE SIDE FOR COMMENTS.
FINAL REPORT MUST CONTAIN INCENTIVE EVALUATION.

OVERALL PERFORMANCE OF CONTRACTOR

1. ☐ OUTSTANDING

3. ☐ ABOVE AVERAGE

5. ☐ BELOW AVERAGE 7. ☐ UNSATISFACTORY

2. ☐ EXCELLENT

4. ☒ AVERAGE

6. ☐ BARELY ADEQUATE

IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.

RECOMMENDED ACTION

☒ CONTINUE AS PROGRAMMED

☐ WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE

☐ TERMINATE

☐ OTHER (Specify)

IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT PUT COMMENTS ON REVERSE IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:

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PROTOTYPES			MANUALS		
DRAWINGS AND SPECIFICATIONS			FINAL REPORT		
PRODUCTION AND/OR OTHER END ITEMS			SPECIAL TOOLING		
			OTHER GOVERNMENT PROPERTY		

DATE OF LAST CONTACT WITH CONTRACTOR

2 September 1965

SIGNATURE OF INSPECTOR

DIVISION

25X1A

INSPECTOR'S EXTENSION

SIGNATURE

Approved For Release 2001/04/02 : CIA-RDP78B04747A000200040014-1

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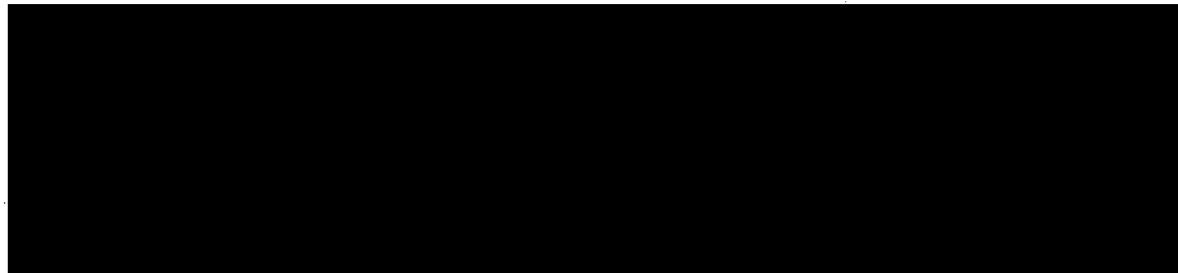
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Approved For Release 2001/04/02 : CIA-RDP78B04747A000200040014-1
NARRATIVE REPORT

☒ INTERIM

☐ FINAL

The following personnel attended a meeting at [REDACTED] on 2 September 1965:



1. Auxiliary Display

Since the stage plates will not be visible to the operator, the contractor has been investigating auxiliary displays. The monitor ruled out photochromic dyes and the contractor was supposed to give a demonstration of a CRT 1000 line system but due to complications, this was postponed till the next visit.

2. Table Configuration

The drawings for the tables look good but the size is excessive. The contractor feels each will be approximately 6 ft. by 6 ft. The base material has not been selected but the following are being considered: granite, mechanite, and stainless steel.

Various roll film supports were studied:

- a. Roll film holders hung on slides so film moves with stage. Rejected.
- b. Hidden spools. Rejected.
- c. Hidden spools requiring 16 ft. leader. Rejected.
- d. Roll film holders attached to stage. TID Representative stated they are presently having trouble with this type of arrangement on another comparator. The contractor feels he can produce a satisfactory model and further investigation will take place.
- e. The TID Representative asked for a -6-stage of approximately $1/5^\circ$ to enable the operator to properly line up the edge of the film on both roll and chip. The contractor feels this can be provided.

General description of the Proposed Tables: 2 stages - X and Y with two support systems each of 3 air bearings. Tables will handle 80 lb. shifting loads and maintain the focal length to $\frac{1}{2}$ micron.

3. Optics

Objective System will be made up of two parts:

- a. Proper
- b. Intermediate - F.L. 50cm. This will also be used for fine focus as [REDACTED] uses it.

There will be three objective lens 3X, 7.5X and 20X with focal lengths of 87mm, 78mm and 180mm respectively.

Oculars of 10X will furnish a range of 10X to 200X.

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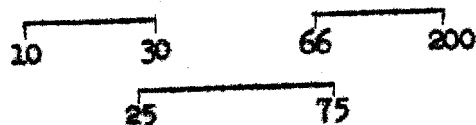
☐ SECRET

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Equivalent f stop of 20X is .9 and NA is .55

Full field of view at 20X is 27mm.

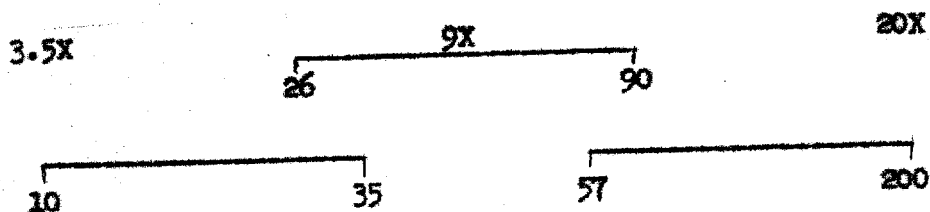
Overlap of 3 objectives is:



There is some question as to the effect of anamorphic eyepieces on a round dot.

Image rotator - Expect to place it between the intermediate lens and the beam splitter. They intend to put the zoom system beyond the beam splitter. The contractor will study the possibility of using a X mirror instead of a pechan prism.

The TID Representative reports most operations take place between 50X and 80X and in the near future it may be doubled. The contractor will investigate the possibility of changing the zoom ratio from 1:3 to 1:3.5 or 3.6.



This would enable the operator to do most of his work without changing objective lens.

Color temperature was discussed at length and they will attempt to maintain 3400° Kelvin.

4. Metering

- The only system thoroughly investigated is the [redacted] old approach. This reportedly operates at 6328 Å and they claim an accuracy of 1 part in 10^9 .
- Other systems to be investigated are the [redacted]

25X1A

25X1A

25X1A

5. Correlator

The electronic digital correlator and the electronic analog correlator methods are being investigated. Names of contacts at [redacted] were obtained so that we may see their correlator in operation.

CONFIDENTIAL

CONTRACT INSPECTION REPORT

CONTRACT NO.

DATE
27 July 1965

INSPECTION REPORT NO. (If final, so state)
1

ESTIMATED COMPLETION DATE
1 January 1966

TO:

ENGINEERING SECTION/CB/PD/OL

NAME OF

TYPE OF COMMODITY OR SERVICE

High Precision Stereo Comparator

THE CONTRACTOR IS ON SCHEDULE

☒ YES

☐ NO

PER CENT OF WORK COMPLETED - 5%

PER CENT OF FUNDS EXPENDED - 5%

THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS ☒ YES ☐ NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED.

HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? ☐ YES ☒ NO (If yes, give details on reverse side.)

HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? ☐ YES ☒ NO (If yes, indicate items, quantity, and cost on reverse side.)

INCENTIVES

IS THIS AN INCENTIVE CONTRACT
IF YES, CHECK TYPE

☐ YES

☒ NO

☐ COST

☐ PERFORMANCE

☐ DELIVERY

NOTE:
USE REVERSE SIDE FOR COMMENTS.
FINAL REPORT MUST CONTAIN INCENTIVE EVALUATION.

OVERALL PERFORMANCE OF CONTRACTOR

1. ☐ OUTSTANDING

2. ☐ EXCELLENT

3. ☐ ABOVE AVERAGE

4. ☒ AVERAGE

5. ☐ BELOW AVERAGE

6. ☐ BARELY ADEQUATE

7. ☐ UNSATISFACTORY

IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.

RECOMMENDED ACTION

☒ CONTINUE AS PROGRAMMED

☐ WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE

☐ TERMINATE

☐ OTHER (Specify)

IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT PUT COMMENTS ON REVERSE IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:

ITEM	REC'D	DOES NOT APPLY	ITEM	REC'D	DOES NOT APPLY
PROTOTYPES			MANUALS		
DRAWINGS AND SPECIFICATIONS			FINAL REPORT		
PRODUCTION AND/OR OTHER END ITEMS			SPECIAL TOOLING		
			OTHER GOVERNMENT PROPERTY		

DATE OF LAST CONTACT WITH CONTRACTOR

23 July 1965

SIGNATURE OF INSPECTOR

DIVISION

SIGNATURE

INSPECTOR'S EXTENSION

Approved For Release 2001/04/02 : CIA-RDP76-04747A000200040014-1

☐ SECRET

☒ CONFIDENTIAL

☐ UNCLASSIFIED

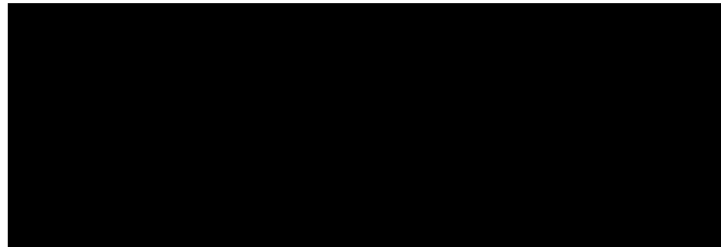
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NARRATIVE REPORT

☒ INTERIM

☐ FINAL

A meeting was held on 23 July 1965 at the contractors facility with the following persons present:



25X1A

The opening remarks and thoughts of the discussion were directed toward the immediate decisions required to approach the study portion of the contract. It was established that the precision stereo comparator would require a non-rigid structural design between both stages. The contractor preferred correlation studies be based on the flying spot scanner technique, however not limited to that one approach.

will consider the Interferometer, the and gas laser systems in their studies associated with the measuring system.

Discussion on the film transport problem evolved around the contractors present efforts to develop an edge guide technique. It was pointed out that the technique demands a one quarter inch border on both edges of the film, thus reducing the overall usable area by a considerable amount. film transport system is plagued with the typical hold down problems encountered in other familiar systems.

The major portion of the meeting dealt with the problems associated with correlation. Again the contractor agreed to investigate the most promising solutions to the problem of stereo correlation. The general approach by will be to try to integrate basic ideas formulated in the development of their and systems, discussed at length in their original proposal. brought up the point of completely automated stereo correlation and the extreme difficulties in designing such a system. reiterated at this point to reassure the group that we were interested in easing the burden on the operator but realized that the operator must assist with the initial correlation.

felt that the magnification specifications would not create any serious problems. He stated that microscope systems of the proposed nature have been achieved previously, but the absolute resolution would not be known until the system was built or breadboarded and tested.

Speculation on the possibility of maintaining absolute correlation while changing from one lense to another, stimulated

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a great deal of discussion.

25X1A During the next month the contractor plans to summarize the capabilities of their [REDACTED] systems as they apply to the present study contract. They will also determine in the next month what portion remains to be completed on the study effort. Their studies during the next month will establish relative costs as a function of complexity.

The effects of vibration were discussed and a copy of the [REDACTED] study on Submicron Measurement Error Analysis was given to the program manager.

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